



Federal Communications Commission
Washington, D.C. 20554

September 22, 2014

DA 14-1369

Ms. Suzanne Malloy
Vice President, Regulatory Affairs
O3b Limited
900 17th Street NW, Suite 300
Washington, DC 20006

Re: O3b Limited
IBFS File No. SES-MS-20140318-00150

Dear Ms. Malloy:

On March 18, 2014, O3b Limited (O3b) filed a request for waiver of the United States Table of Frequency Allocations and the Commission's Ka-band Plan¹ in connection with its plan to test and operate earth stations on three non-U.S. registered maritime vessels in and near U.S. territorial waters.² O3b Limited's service will involve up to three 2.2 meter antennas per maritime vessel which will operate using the 28.35-28.4 GHz (Earth-to-space) and 18.3-18.6 GHz (space-to-Earth) frequency bands to communicate with its non-geostationary orbit (NGSO) Fixed-Satellite Service (FSS) system licensed by the United Kingdom.³ O3b indicates that its operations aboard non-U.S. registered maritime vessels will be pursuant to an authorization from the Utilities Regulation and Competition Authority of the Bahamas.⁴

Although the Commission does not license transmissions on non-U.S. registered maritime vessels, O3b is nevertheless required to comply with the Commission's interference regulations to the

¹ The Commission issued a series of related Orders in CC Docket No. 92-297. *The First Report and Order* in the proceeding established an allocation plan for use of the Ka-band by non-Federal users. Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services, *First Report and Order and Fourth Notice of Proposed Rulemaking*, 11 FCC Rcd 19005 (1996) (*Ka-band Report and Order*), modified by *Third Report and Order*, 12 FCC Rcd 22310 (1997).

² See O3b Waiver Request, IBFS File No. SES-MS-20140318-00150, (O3b Waiver Request), Attachment A at 2-3 (providing a description and plot of the service area for its maritime routes).

³ O3b launched its first set of four satellites in 2013 and a second set of four satellites in 2014. The Commission previously authorized O3b to operate two gateway FSS earth stations to communicate with O3b's NGSO FSS Ka-band system. O3b Limited, IBFS File No. SES-LIC-20130124-00089 (Vernon, Texas, Call Sign E130021), granted June 20, 2013 and IBFS File No. SES-LIC-20100723-00952 (Haleiwa, Hawaii, Call Sign E100088), granted Sept. 25, 2012. More recently, the Satellite Division granted O3b's blanket license application to operate up to one hundred 2.2 meter antennas, and one hundred 1.2 meter antennas on U.S. registered maritime vessels using the 18.8-19.3 GHz (space-to-Earth) and 28.6-29.1 GHz (Earth-to-space) frequency bands. IBFS File No. SES-LIC-20130528-00455 (granted May 13, 2014). See also Letter to Joslyn Read, VP Regulatory Affairs, O3b Limited, from Jose Albuquerque, Chief, Satellite Division, International Bureau, and Mark Settle, Chief, Policy and Rules Division, Office of Engineering and Technology, DA 14-637 (IB/OET May 13, 2014).

⁴ O3b Waiver Request, Narrative at 2.

extent its signals are received within the United States.⁵ The use of the radiocommunication frequencies in the United States must be in accordance with the Table of Frequency Allocations contained in Section 2.106 of the Commission's rules. O3b plans to operate the earth stations on non-U.S. registered maritime vessels in the 28.35-28.4 GHz (Earth-to-space) frequency bands allocated to the FSS and, according to the Ka-band Plan, designated to geostationary orbit (GSO) FSS systems on a primary basis, and to NGSO FSS systems on a secondary basis.⁶ It also plans to operate in the 18.3-18.6 GHz (space-to-Earth) frequency band which is allocated to the FSS and limited to GSO FSS systems.⁷ Because the Commission has not adopted technical rules governing satellite operations in the Ka-band aboard maritime vessels,⁸ we view O3b's planned operations as requiring a waiver of the Commission's Table of Frequency Allocations and the Ka-band Plan.

In considering requests for non-conforming spectrum uses, the Commission has indicated it would generally grant such waivers when there is little potential for interference into any service authorized under the U.S. Table of Frequency Allocations and when the non-conforming operator accepts any interference from authorized services.⁹ O3b represents that its operations will not cause harmful interference to present or future users of these bands.¹⁰

In particular, O3b provides an analysis that it will not cause interference to any service authorized under the U.S. Table of Frequency Allocations, and will accept interference from services authorized by the Commission.¹¹ O3b also demonstrated that the operations addressed in the waiver will provide the

⁵ See 47 U.S.C. § 306. This section provides that Section 301 of this title shall not apply to any person sending radio communications or signals on a foreign ship while the same is within the jurisdiction of the United States, but such communications or signals shall be transmitted only in accordance with such regulations designed to prevent interference as may be promulgated under the authority of this chapter. See also *United States v. McIntire*, 365 F. Supp. 618, 622 n.11 (D.N.J., 1973)(The Commission has authority to take action against a party broadcasting in violation of its rules, without a license, and whose broadcasts causes interference to Commission-licensed broadcasters, even though the broadcaster was operating from a boat outside U.S. territorial waters).

⁶ *Ka-band Report and Order*, 11 FCC Rcd at 19029.

⁷ 47 C.F.R. § 2.106, Footnote NG164.

⁸ 47 C.F.R. § 2.106; *Ka-band Report and Order*, 11 FCC Rcd 19005 (1996) and *Third Report and Order*, 12 FCC Rcd 22310 (1997).

⁹ *Contactmeo Communications, LLC*, Order and Authorization, 21 FCC Rcd 4035, 4044 (IB 2006); see also 47 C.F.R. § 1.3.

¹⁰ It is our understanding that O3b's operations will comply with coordination agreements reached between the United Kingdom and other Administrations, including all coordination agreements reached between the United Kingdom and the United States (see e.g., UK Telefax SSU 2000 dated 29 May 2009). Further, O3b will not receive transmissions from O3b's NGSO space stations in the 18.3-18.6 GHz frequency band (space-to-Earth) until O3b has completed coordination of its NGSO FSS system with all Federal FSS systems in the 18.3-18.6 GHz frequency band under 47 C.F.R. § 2.106, Footnote US334.

¹¹ O3b Waiver Request, Narrative at 3. It is our understanding that O3b will operate within the EPFD limits of Articles 22.5C, 22.5D, and 22.5F of the ITU Radio Regulations. See O3b Waiver Request, Attachment A at 6-7, and Letter to Marlene H. Dortch, Secretary, FCC, from Joslyn Read, Vice President, Regulatory Affairs, O3b Networks (Aug. 14, 2014)(providing supplemental information for the waiver request) (August 14 Letter). The maximum downlink power flux density (PFD) level O3b proposes to use is significantly lower than the PFD level specified in sections 25.138 and 25.208, 47 C.F.R. §§ 25.138 and 25.208, of the Commission's rules. O3b Waiver Request, IBFS File No. SES-MS-20140318-00150, (O3b Waiver Request), Attachment A at 3-4.

requisite level of protection for GSO FSS systems.¹² O3b's waiver request was placed on public notice on May 21, 2014.¹³ No comments or other pleadings have been filed. Based on the information on file with the Commission, the proposed operations do not pose a risk of interference to other users of the band.¹⁴ Consequently, we grant O3b's waiver request conditioned on operations on an unprotected, non-interference basis in the 28.35-28.4 GHz (Earth-to-space) and 18.3-18.6 GHz (space-to-Earth) frequency bands. Accordingly, O3b's operations on non-U.S. registered maritime vessels must accept interference from any authorized users in these bands and may not cause harmful interference to any authorized user in these bands.

Sincerely,

Jose P. Albuquerque
Chief, Satellite Division
International Bureau

Mark Settle
Chief, Policy and Rules Division
Office of Engineering and Technology

¹² O3b Waiver Request, Narrative at 4.

¹³ Public Notice, Satellite Communications Services, Report No. SES-01648 (May 14, 2014).

¹⁴ O3b Waiver Request, Attachment A at 14-16 and August 14 Letter.